

REMARKS

The specification has been amended to correct typographical errors. No new matter has been added.

Claims 1, 17-19, 22, 28, 50, 62, 63, 67, 75, 77, 106, and 111 have been amended. Claims 16, 20, 21, 23, 58, 76, 110 and 112 have been canceled without prejudice to the underlying subject matter. Claims 8 and 88-105 were previously canceled. Claims 115-135 have been added. No new matter has been added. Claims 1-7, 9-16, 17-19, 22, 24-57, 59-75, 77-110, 11, and 113-135 are currently pending in this application.

Claims 28-50, 62, 63, 67, and 106 are objected to because of informalities. Specifically, claim 28 is objected to because, in line 10, "said first active layer should read "said first doped active layer." Claims 28-49 depend from claim 28. Claim 50 is objected to because, in line 8, "said first doped layer" should read "said first doped photoactive layer," and, in lines 10-12, "second photoactive layers" should read "second doped photoactive layers." Claim 67 is objected to because in lines 13 and 15 "said first photoactive layer" should read "said first doped photoactive layer." Claims 68-87 depend from claim 67. Claims 62 and 63 were amended to depend from claim 50. Claim 106 is objected to because in line 4, "said doped active layer" should read "said first doped active layer," and, in line 6, "second active layers" should read "second doped active layers." Claims 28, 50, 67, and 106 have been amended to correct these informalities. Therefore, withdrawal of these objections is respectfully requested.

Claims 16-19, 20-23, 110, and 111 are objected to as being dependent on a rejected base claim, but would be allowable if rewritten in independent form. Claim 16 has been canceled and its subject matter has been incorporated into claim 1. Accordingly, claim 1 and claims 2-19, 22, 24-27, and 124, which depend from claim 1,

are now in condition for allowance. Also, claim 110 has been canceled and its subject matter has been incorporated into claim 106. Accordingly, claim 106 and claims 107-109, 111, 113, and 114, which depend from claim 106, are now in condition for allowance. Therefore, withdrawal of this objection is respectfully requested.

Applicants graciously acknowledge the Examiners indication that claims 28-49, 67-75, and 77-87 contain allowable subject matter. As new claim 125 depends from claim 28, Applicant submits that new claim 125 is also in a condition for allowance.

New claims 115-123 and 126-135 are also in a condition for allowance. Claim 115 recites a “third doped active layer at least partially within said first doped active layer.” Claim 126 recites a “second doped n-type active layer at least partially within said first doped n-type active layer.” As noted by the Examiner, none of the references disclose, teach, or suggest a doped active layer at least partially within a first doped active layer. Office Action at 10. For at least these reasons, Applicant respectfully requests the allowance of claims 115-123 and 126-135.

Claims 76 and 112 stand rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the enablement requirement. In light of the amendments herein, this rejection is moot.

Claims 20-23 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. This rejection is respectfully traversed.

Claims 20, 21, and 23 have been canceled. Claim 22 has been amended to depend from claim 1. Accordingly, withdrawal of this rejection is respectfully requested.

Claims 1, 2, 4, 9, 10, 24-27, 50, 51, 53, 58, 60, 65, 66, 106, 113, and 114 stand rejected under 35 U.S.C. § 102 as being anticipated by Connolly et al., US Patent No. 6,259,145 ("Connolly"). This rejection is respectfully traversed.

As discussed above, claims 1, 2, 4, 9, 10, 24-27, 106, 113, and 114 are now in a condition for allowance.

Independent claim 50 has been amended to require "a fourth doped active layer at least partially within said first doped active layer." As indicated by the Examiner, none of the references disclose, teach or suggest a fourth doped active layer at least partially within the first doped active layer. Accordingly, claim 50 and claims 51-57 and 59-66, which depend from claim 50, are now in a condition for allowance. For at least these reasons, withdrawal of this rejection is respectfully requested.

Claims 3, 15, 52, and 54 stand rejected under 35 U.S.C. § 103 as being unpatentable over Connolly in view of Chang, US Patent No. 6,140,670 ("Chang"). This rejection is respectfully traversed.

As discussed above, claims 3, 15, 52, and 54 are now in a condition for allowance. For at least these reasons, withdrawal of this rejection is respectfully requested.

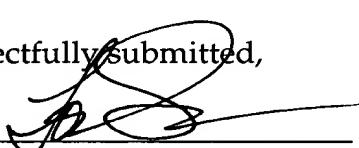
Claims 5-7, 11-14, 55-57, 59, 61, 64, and 107-109 stand rejected under 35 U.S.C. § 103 as being unpatentable over Connolly. This rejection is respectfully traversed.

As discussed above, claims 5-7, 11-14, 55-57, 59, 61, 64, and 107-109 are now in a condition for allowance. For at least these reasons, withdrawal of this rejection is respectfully requested.

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to pass this application to issue.

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Respectfully submitted,

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